Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • **Whole Grain**

Synonyms • **Corn; Corn Dust**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Animal Nutrition, Food, Ethanol Production

1.3 Details of the supplier of the safety data sheet

Manufacturer • Homeland Energy Solutions
2779 Hwy 24
Lawler, IA 52154
United States
www.homelandenergysolutions.com

Telephone (General) • (563) 238-5555

Telephone (General) • (563) 238-5557 - Fax

1.4 Emergency telephone number

Manufacturer • 1-800-424-9300 - CHEMTREC

Section 2: Hazards Identification

UN GHS

According to Third Revised Edition

2.1 Classification of the substance or mixture

UN GHS • Eye Irritation 2B - H3

2.2 Label elements

UN GHS

WARNING

Hazard Statements

- H320 – Causes eye irritation

Precautionary Statements

- P261 – Avoid breathing dust
- P262 – Do not get in eyes

Response

- P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P304+P312 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.

2.3 Other hazards

UN GHS • According to the Globally Harmonized System for Classification and Labeling (GHS) this product is not considered hazardous.

United States (US)
According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture
OSHA HCS
- Not classified

2.2 Label elements
OSHA HCS
- Not required

2.3 Other hazards
OSHA HCS
- This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

2.4 Other information
NFPA

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

Non-Hazardous Components					
Chemical Name	**Identifiers**	**%(weight)**	**LD50/LC50**	**Classifications According to Regulation/Directive**	**Comments**
Whole Grains	NDA	100%	NDA	**UN GHS:** Not Classified	NDA

3.2 Mixtures
- Material does not meet the criteria of a mixture according to United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures
Inhalation
- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

Skin
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. If irritation develops and persists, get medical attention.

Eye
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended.

4.2 Most important symptoms and effects, both acute and delayed
- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- Immediate medical attention after exposure to this material not expected to be necessary. No special treatment indicated related to exposure to this material.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media

- Material is combustible. In case of fire use media as appropriate for surrounding fire.

Unsuitable Extinguishing Media

- None known.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- Whole grain is combustible but not explosive. Fine dust from the grain, dispersed in air at a sufficient concentration, may ignite or explode if exposed to an ignition source.

Hazardous Combustion Products

- Carbon dioxide and possibly carbon monoxide.

5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Use care for slip/fall hazards on spilled grains.

Emergency Procedures

- No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended.

6.2 Environmental precautions

- No special environmental precautions necessary.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Carefully shovel or sweep up spilled material and place in suitable container.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use good safety and industrial hygiene practices. Wash thoroughly after handling and before eating, drinking or smoking.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container closed. Store in a cool, dry, well-ventilated place.

Incompatible Materials or Ignition Sources

- Strong acids, strong bases, and oxidizing agents.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines

- OSHA PEL – 15 MG/M3 (Total), 5 MG/M3 (Respirable)
- ACGIH TLV – 10 MG/M3

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- An appropriate NIOSH/MSHA-approved respirator or self-contained breathing apparatus should be worn when any exposure limit is exceeded.

Eye/Face

- Wear safety goggles.

Skin/Body

- Wear appropriate gloves. Wear long sleeves and/or protective coveralls.

General Industrial Hygiene Considerations

- Wash hands before eating.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste.

Key to abbreviations

MSHA = Mine Safety and Health Administration
NIOSH = National Institute of Occupational Safety and Health
OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	**Appearance/Description**	Straw-yellow to brown-yellow wet grains solids, slight grains aroma.
Color	Straw-yellow to brown-yellow.	**Odor**	Slight grains aroma.
Taste	No data available	**Particulate Type**	No data available Granular
Particulate Size	No data available	**Aerosol Type**	No data available
Odor Threshold	No data available	**Physical and Chemical Properties**	No data available
General Properties			
Boiling Point	No data available	**Melting Point**	No data available
Decomposition Temperature	No data available	**Heat of Decomposition**	No data available
pH	No data available	**Specific Gravity/Relative Density**	No data available
Density	No data available	**Bulk Density**	No data available
Water Solubility	Negligible	**Solvent Solubility**	No data available
Viscosity	No data available	**Explosive Properties**	No data available
Oxidizing Properties:	No data available		
Volatility			

Vapor Pressure	No data available	**Vapor Density**	No data available
Evaporation Rate	No data available	**VOC (Wt.)**	No data available
VOC (Vol.)	No data available	**Volatiles (Wt.)**	No data available
Volatiles (Vol.)	No data available		
Flammability			
Flash Point	No data available	**UEL**	No data available
LEL	No data available	**Autoignition**	No data available
Self-Accelerating Decomposition Temperature (SADT)	No data available	**Heat of Combustion (ΔHc)**	No data available
Burning Time	No data available	**Flame Duration**	No data available
Flame Height	No data available	**Flame Extension**	No data available
Ignition Distance	No data available	**Flammability (solid, gas)**	No data available
Environmental			
Half-Life	No data available	**Octanol/Water Partition coefficient**	No data available
Coefficient of water/oil distribution	No data available	**Bioaccumulation Factor**	No data available
Bioconcentration Factor	No data available	**Biochemical Oxygen Demand BOD/BOD5**	No data available
Chemical Oxygen Demand	No data available	**Persistence**	No data available
Degradation	No data available		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization not indicated.

10.4 Conditions to avoid

- Heat, sparks, open flame. Incompatible materials. Dispersing dust in air.

10.5 Incompatible materials

- Strong acids, strong bases, and oxidizing agents.

10.6 Hazardous decomposition products

- None. However, as with any organic material, combustion will product carbon dioxide and possibly carbon monoxide.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Other Material Information

- No toxicological effects are expected to occur related to exposure to this material. If material dries out the hazards from exposure of the dust are represented below.

GHS Properties	Classification
Acute toxicity	**UN GHS** • Data lacking
Skin corrosion/Irritation	**UN GHS** • Data lacking
Serious eye damage/Irritation	**UN GHS** • Eye Irritation 2B
Skin sensitization	**UN GHS** • Data lacking
Respiratory sensitization	**UN GHS** • Data lacking
Aspiration Hazard	**UN GHS** • Data lacking
Carcinogenicity	**UN GHS** • Data lacking
Germ Cell Mutagenicity	**UN GHS** • Data lacking
Toxicity for Reproduction	**UN GHS** • Data lacking
STOT-SE	**UN GHS** • Data lacking
STOT-RE	**UN GHS** • Data lacking

Route(s) of entry/exposure

- Inhalation, Skin, Eye, Ingestion

Medical Conditions Aggravated by Exposure

- Disorders of the lungs.

Potential Health Effects

Inhalation

Acute (Immediate)

- Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.

Chronic (Delayed)

- Prolonged exposure to the dust may cause wheezing, chest tightness, productive cough nasal irritation and symptoms of chronic respiratory disease. Dust may also induce asthmatic reactions via an allergic mechanism, particularly in individuals who are predisposed to developing allergies.

Skin

Acute (Immediate)

- Exposure to dust may cause mechanical irritation.

Chronic (Delayed)

- No data available.

Eye

Acute (Immediate)

- Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

Chronic (Delayed)

- No data available.

Ingestion

Acute (Immediate)

- Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

Chronic (Delayed)

- No chronic effects expected, material is an animal feed ingredient.

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been carried out.

12.6 Other adverse effects

- Material data lacking.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user
- None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Not relevant.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications
- None

State Right To Know				
Component	**CAS**	**MA**	**NJ**	**PA**
Wet grain solids	NDA	No	No	No

Inventory		
Component	**CAS**	**TSCA**
Wet grain solids	NDA	No

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

Not Listed

United States - Rhode Island

Labor

U.S. - Rhode Island - Hazardous Substance List

Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Last Revision Date	• 04/August/2015
Preparation Date	• 04/August/2015
Disclaimer/Statement of Liability	• The information contained herein is believed to be accurate. It is not intended to constitute performance information concerning the product. No Express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

Key to abbreviations

NDA = No Data Available